Software Packages for Sanskrit

♦111. SHRI PRAMOD MAHAJAN:
SHRI ASHWANI KUMAR:

Will the PRIME MINISTER be pleased to state:

(a) what are the software packages for Sanskrit available and which ones are envisaged for development during the year 1990;

(b) whether some audio and audiovisual tapes have been prepared for research purposes of the Vedic and ancient sciences, depicting recitations and related procedures; if so, the details thereof; and

(c) whether more such software packages are being envisaged to be made- available for scholars and others, if so, what are the details
there of? *J*

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE AND TECHNOLOGY WITH ADDITIONAL CHARGE OF THE MINISTER OF STATE IN DEPARTMENT OF EDUCATION IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT (PROF. M. G. K. MENON): (a) to (c) As' part of the project at Centre for Development of Advanced Computing (C-DAC), Pune on the use of Sanskrit as a language for computer, some programming environments have been developed which.allow all Indian scripts including Devnagri to be used in Programming. Symbolic programming languages like LISP and PROLOG can now be used for Sanskrit, In order to fully develop Paninian grammar on the computer for the purpose of investigating the use of Sanskrit for natural language processing, basic support tools, incorporating the grammar rules such as Sandhi," Vigrah, Shabdaroop and Dhaturoop have been developed using LISP. The prototype of an expert system shall called "Visheshgya" has been completed. This can be .used by scholars of Sanskrit and ancient, Indian sciences for entering **know**-ledge on specific domains.

A Sanskrit Intelligent Tutoring System for Tenth Standard students has been developed which will help in the training of Sanskrit in Schools. Further software for the implementation of the rules of Paninian Grammar will be developed. Preliminary software development work done on the Sanskrit sentence Panser will be refined. Further work on Visheshgya will be undertaken.

A separate project on "Computer Assisted Sanskrit Teaching|Learning Environment" has started at Jawaharlal Nehru University, New Delhi and Lal Bahadur Shastri Kendriya Sanskrit Vidyapeeth, New Delhi. Under these, basic design of the software for teaching alphabet their properties, Sandhis have been undertaken. Also a nucleus software system has been designed which will be used in implementing the teaching|learning lessons and exercises. No audio-visual tapes have been prepared in this context for research purposes of the vedic and ancient Sciences.

Disparity in the Forest cover as per Revenue Records and as per Satellite Picture

•112. SHRI MURLIDHAR CHANDRAKANT BHANDARE:
DR. RATNAKAR PANDEY:

Will the PRIME MINISTER be pleased to state:

(a) what are the details of the extent of forest cover in the country as per revenue records and as per the satellite pictures;

(b) whether it is a fact that there is a vast disparity regarding the forest cover as per the revenue records and as per the satellite pictures;

(c) if so, what are the reasons therefor; and

(d) what steps are being taken for restoration of eco-balance which has been disturbed with the depredation